SUMMARY TRANSLATION OF "RADIO" NO. 11 [NOVEMBER] FOR 1989

[Rough, summary translations of selected articles, mostly on amateur radio subjects, from **RADIO**, a monthly magazine published jointly by the Ministry of Communication of the USSR and the military-training organization DOSAAF.]

[As part of their support of the International Amateur Radio Union, the Region 1 IARU Secretariat and The American Radio Relay League, Inc. reimburse the translator for subscription and postal costs.]

[Square brackets serve to identify material added by the translator **and not appearing in the original** -- such as a comment, a reference, or the equivalent of an expression in the other language.]

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Outer front cover, pp 12 - 14: "34TH ALL-UNION RADIO EXHIBITION: THE JURY'S OPINION," by A. Smirnov, Deputy Chairman of the Jury of the Exhibition.

The exhibition was enlivened by amateur construction and by the desire to have access to foreign sources of videoinformation since [Soviet] television, especially entertainment programming, doesn't satisfy young people. A new direction of research became evident in the form of satellite receiving systems. At the 34th All-Union Radio Exhibition, a system for receiving television broadcasting from geostationary satellites was exhibited by V[al'demars] E. Ketners.[1] It included a satellite, a television antenna, an SHF [3 - 30 GHz] converter with amplifier, a satellite television receiver, and a PAL-SECAM transcoder. The SHF converter, installed at the focus of a parabolic antenna, converts a signal in the range 10.95 - 11.36 GHz to a signal in the range 0.95 - 1.35 GHz, which enters the input of the receiver, where it is further processed into a signal of the order of 70 MHz and either goes through the transcoder or goes directly to an ordinary television set if the set is equipped to receive PAL.

In response to numerous requests, Val'demars E. Kentners' address is as follows: 228300 g. Ogre, LSSR, ul. Kokneses, 20 [20 Kokneses St., 228300 OGRE, Latvia].

It's no accident that many participants considered that tying radioamateur-constructors to DOSAAF has become outmoded.

We should perhaps consider whether to rename the exhibition "Exhibition of Achievements of Radioamateur-Constructors of the Soviet Union." All kinds of organizations should be able to participate. The organizational work could [continue to] be entrusted to DOSAAF committees.

Maybe some won't like these suggestions and will propose alternatives. But something needs to be done to overcome stagnation in organizing radioamateur exhibitions and in running the amateur radio movement itself.

pp 2 - 3: "WHEN WILL THE ICE BEGIN TO BREAK UP?" ["KOGDA TRONETSYA LED?"], by A[natoliy Vladimirovich] Gorokhovskiy, Editor-in-Chief, "Radio" Magazine.

This article is an appeal to radio amateurs and perhaps most of all to radioamateur-contructors as the most isolated part of amateur radio. We are all bored to death [being told] that the radio amateur movement is living through far from its best times, that it is characterized by stagnation effects [zastoynyye yavleniya], and that in some respects faces a critical situation. Nonetheless, I think we need to return again to this problem...

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[1]Summary translation RADIO #08/1989, p 4, described the same exhibit, which featured reception of an "ECS" satellite positioned at 013°. Ketners, pictured on the front cover of the present issue, seems to me to bear a striking likeless to President Jimmy Carter.]

My article "Are We Ready for Conducting the Conference"[2] was published not long before the Radioamateur Conference (April 1988). It unleashed a flood of critical reactions. Many thought for some reason that the article was directed **against** the holding of the conference. But the conference itself confirmed that basic thesis of the article: Instead of first mapping out an all-Union forum to consider the painful problems of the entire radio amateur movement, what took place was a useful conversation but purely a "shortwave conversation." Passions that had boiled up before and during the first part of the conference, cooled down somewhat when those who had come to Moscow were informed about the package, as it's now fashionable to say, of decisions on a number of problems and matters of great concern to shortwavers.[3]

But the main thing, in my view, is that organizational forms meeting [the needs of] the times and capable of blowing new wind into the sails of our movement, without which amateur radio and its primary element [? - pervoosnovo] -- amateur construction [lyubitel'skoye konstruirovaniye] -- cannot fully function let alone develop, and the material base [meaning premises and equipment], were not the main subjects of the conference.

Almost two years have gone by [since the conference], but little has changed for the better and the number of clubs is practically not growing. As before, things are going poorly regarding radioparts and amateur equipment and shortwavers haven't received the right [to use] new (for us) communication modes. Up to now, the name of the federation hasn't been changed, and it is the name that determines the direction of the work and the concerns of the federation [the Federation of Radio Sport of the USSR], the UTVPS [Upravleniye tekhnicheskikh i voyenno-prikladnykh vidov sporta - the Administration of Technical and Military-Application Forms of Sport], and those subdivisions at the local level that are called upon to occupy themselves with amateur radio. [The Central Radio Club and the UTVPS are components of DOSAAF.]

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[2]Gorokhovskiy's earlier article -- actually entitled "Are We Ready for Conversation?" -- appeared in Sovetskiy Patriot of 13 March 1988, p 4; see summary translation RADIO #02/1988. This important article shed light on the seemingly strained relations between the numerically vastly superior "radio constructors" and those engaged in what would in most other countries be considered amateur radio.

[3]These problems are not described here, but probably included the prohibition against receiving QSL cards directly and the need to get special permission to work amateurs in "all" -- i.e. including capitalist -- countries. Both of these restrictions were removed.

Half a year ago, yet another decision [postanovleniye] "On the State and Measures for the Further Improvement of Amateur Radio and Radiosport in the Country" (28 April 1989) was adopted by the Bureau of the Presidium of the Central Committee of DOSAAF USSR. The decision reflects concern over the situation in which amateur radio finds itself. It is directed to a great extent to local organizations of the Defense Society [DOSAAF] and to the public. This is completely logical: In our times, the fate of perestroyka [restructuring] is determined in large part by businesslike behavior and initiatives at the local level and in collectives.

At last a definite statement is made in the decision about the need to open specialized sport-technical radio clubs in republic, kray, and oblast' capitals. A recommendation is also made to open clubs in cities/towns and rayon capitals, as well as in primary [DOSAAF?] organizations and in residential areas.

Also important in my view is the recommendation in the decision that work in the field of amateur radio be carried out together with trade unions and the komsomol [komunisticheskiy soyuz molodezhi - Communist Youth League, the party youth organization].

We the editors await information from you the readers on the current state of affairs in amateur radio. Has the ice finally begun to break up?

Many DOSAAF organizations have long since lost interest in amateur radio, have withdrawn from leading the amateur radio movement, and provide no support for independent [amateurradio-] constructors. This explains why radioamateur-constructors have stopped being attracted to DOSAAF. There are now about 60 thousand of them in DOSAAF, whereas there are hundreds of thousands in the country.[4] Interest in exhibitions by radioamateur-constructors is lessening and the level of many of the exhibits leaves much to be desired. All this is no accident and is very alarming.

A sober analysis of the facts is needed. The train with many radio amateurs aboard has left the DOSAAF platform. This points to the need to unite our forces and to overcome bureaucratic barriers in order to accelerate the rebirth of organized amateur radio, not [so much] in DOSAAF but [rather] in the country [as a whole] with active participation by DOSAAF organizations.

Attempts, even today, to monopolize the leadership of amateur radio are very dangerous to its future.

Here I'd like to mention a useful initiative in Donetsk, where the city komsomol committee has decided to become involved with amateur radio and to assist in attracting youth to useful pursuits. But at first this initiative wasn't supported in the local federation [of radio sport], though thank God conflict was avoided and an understanding was reached.

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[4]In contrast to his mention in the present article of "hundreds of thousands" of radioamateur constructors, Gorokhovskiy put their number at between 2,000,000 and 2,500,000 in the article cited in footnote 2. The imprecision as to their total number in the USSR thus spans an order of magnitude!

Local DOSAAF organizations should find ways to make use of the existing komsomol youth technical creativity centers[5] which could become centers of construction creativity in the field of radioelectronics. Based on these centers, the federations could, together with the komsomol, develop amateur radio and radiosport and open collective stations. After all, helping boys and girls (and not only boys and girls) find a place in radioelectronics is a matter of national importance.

As is known, interest in the technical professions, including radioelectronics, has decreased. Already our country lags behind developed foreign countries in a number of fields of radioelectronics. The decrease in radio amateur activity has something to do with this. Experience shows that amateur radio is an excellent school for training future specialists. Amateur radio isn't just a "hobby" ["khobbi"] but one way of searching for and selecting highly-qualified radioelectronics workers of the future.

There is a need to expand in every way the network of radio clubs, be they purely DOSAAF clubs or jointly-sponsored clubs or clubs with modest DOSAAF participation. Local circumstances should be taken into account. The main thing is that there be enough clubs and that they be well equipped. They should operate with as much volunteerism, independent creativity, and democracy -- and with as little over-organization and bureaucracy -- as possible.

Clubs can be sport-technical, purely sport, or purely technical. They can be based on a narrow branch of technical creativity, for example computers.

Another important matter is club activity on the basis of self-support, pay-back, [and] self-financing [na osnove khozrascheta, samookupayemosti, samofinansirovaniya]. Broad areas of activity are open to the initiative and creative abilities of club members participating in fund-raising activity. Funds earned by clubs will permit resolving the present problem of finding qualified club workers due to low salaries.

In Czechoslovakia and Romania, I've seen very successful self-supporting club activity, thanks to which clubs are prospering and are carrying on multifaceted amateur radio work. Such clubs have begun to appear here.

And, finally, some words about the organizational structure for managing amateur radio and radiosport. The present forms, including the Federation [of Radio Sport] and the Central Radio Club of the USSR, need to be seriously thought about. Are they consistent with the development of amateur radio and with the process of democratization gathering force in our society?

Should the Federation exist in its present form or is a new form needed for bringing radio amateurs together? What should the Federation's status be and should it have funds at its disposal? If so (and the answer seems to be yes), where should these funds come from, and should there be membership in the Federation?

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[5]Tsentry tekhnicheskoy tvorchestva molodezhi, assumed identical to the komsomol "NTTMs" mentioned in the third paragraph of page 8.

These are only some of the questions and problems relating to perestroyka (not talk about perestroyka) in the radio amateur movement. Several times the duplication of activity between the [DOSAAF] Radiosport Department [otdel radiosporta] and the CRC has been discussed on the pages of the magazine, as has the degree to which the radio amateur movement corresponds to the nature of the work and the tasks of the [DOSAAF] sport administration (UTVPS)

* * *

As we can see, there are many problems. Perestroyka has as yet practically not touched amateur radio. So perhaps perestroyka isn't needed in amateur radio? I don't think so. The problems listed here aren't simple, but they can't be put off indefinitely.

I wouldn't dare give recipes for the revival of the radio amateur movement. What do you, the reader, think about this?

p 5: "EVERYDAY RADIOCOMMUNICATION" [RADIOSVYAZ' NA KAZHDYY DEN'].

Many readers ask what equipment and frequencies can be used for simple everyday radiocommunication, for example by tourists, mountain-climbers, automobile drivers, etc.

V[eniamin] Yu[l'yevich] Khoroshchanskiy, Chief of the State Telecommunication Inspectorate of the Ministry of Communication of the USSR, answers as follows.

By Decision [Resheniye] of the State Radiofrequency Commission of the USSR [Gosudarstvennaya komissiya po radiochastotam SSSR] of 30 December 1988 (Protocol No. 170) frequencies have been alloted [? - vydeleny] for the development of portable receiving-transmitting radio sets and their sale through the trade network as popular consumer items. For all intents and purposes every citizen of the USSR will, after receiving permission from the State Telecommunication Inspectorate, be able to purchase and use a radio set operating on 27 MHz.

The following types of radio equipment are being developed at the present time:

= Portable simplex radio sets equipped with one or more fixed frequencies.
= Protective radio alarm devices [? - ustroystva okhrannoy radiosignalizatsii] with a range of up to 100m, operating on one fixed frequency.

...

p 6: "RAS IS LOOKING FOR VOLUNTEERS," from the Federal Coordinating Council of the RAS attached to the Federation of Radio Sport of the USSR [Federal'nyy koordinatsionnyy sovet RAS pri FRS SSSR].

The disaster in Armenia [the earthquake of 7 December 1988] showed clearly that we can't do without a rescue service.

The Union of Red Cross and Red Crescent Societies of the USSR [Soyuz obshchestv Krasnogo Kresta i Krasnogo Polumesyatsa SSSR] has undertaken to create an All-Union Rescue Center [vsesoyuznyy spasatel'nyy tsentr].

An emergency radioamateur communication service must become an important subdivision of this center.

The RAS [Radiolyubitel'skaya Avariynaya Sluzhba - Radioamateur Emergency Service has been established by decision of the Federation of Radio Sport of the USSR.

This public organization has been set up on a volunteer basis.

Its basic purpose is to provide immediate assistance in cases of natural disasters as well as major industrial accidents and catastrophes.

A. Panormov, UV3DHH, senior engineer of the Central Radio Club Named After E. T. Krenkel', has been elected temporary director of the Federal Coordinating Center [Federal'nyy koordinatsionnyy soviet] of the RAS, which hs the status of a committee of the Federation of Radio Sport.

RAS works closely with Red Cross and Red Crescent societies, national civil defense organizations, and rescue organizations.

RAS is counting on the assistance of all radio amateurs in the USSR.

In order to establish a network of RAS support stations throughout the country, we ask radio amateurs to provide, without delay, information on collective stations that can be included in RAS operations.

These collective stations must satisfy the following requirements:

Obligatory

1. Uninterrupted on-the-air operation for 14 days, with obligatory relief of, and complete rest for, operators.
2. At least three operating positions (2 basic, 1 spare).
3. Simultaneous operation from two operating positions on two separate bands or on the same band.
4. All-band operation.
5. Efficient antennas and spare antennas.
6. Contest experience.
7. Reliable telephone line.

Desirable

1. Independent power source.
2. RTTY capability.
3. Computer availability and intention to master PACKET RADIO, SSTV, and AMTOR within a short time.
4. Ability to notify team members rapidly.

Operator Requirements

-- A high degree of personal responsibility.
-- Good knowledge of CW.
-- Sufficient knowledge of foreign languages to transmit RAS messages.

RAS is also interested in radioamateur collectives and in individual operators with shortwave operating experience under field conditions, having mobile equipment, and especially in amateurs with mountain-climbing or tourist [hiking?] experience and corresponding equipment. If in addition you have a physician's or a medical assistant's diploma, you'll constitute a golden reserve for the RAS.

We suggest that everyone, once he has considering his own situation, register with the RAS. Fortunately, it should be noted, emergencies and natural disasters don't occur every day, and no one will go to a hot spot immediately after registering.

Naturally, the RAS doesn't earn any money, and for this reason needs contributions and perhaps more or less regular financial support. The "RADIO CENTER" ["RADIOTSENTR"] Association Attached to the Central Radio Club of the USSR Named After E. T. Krenkel' has kindly agreed to make its account available for RAS' needs, and also to contribute a portion of its income to the RAS.[6]

We call upon radioamateur cooperatives, associations, NTTM [nauchno-tekhnicheskoye tvorchestvo molodezhi - Scientific-Technical Creativity by Young People] centers, and state and public organizations to support the RAS.

The account number is 1700423 at the Tushinskiy branch of the Promstroybank of the City of Moscow ("for RAS"). We are prepared to give our sponsors a full financial report upon request.

Remember! By contributing to the Radioamateur Emergency Service you become involved in the noble deed of helping people in distress.

Address: 123459, Moskva, Pokhodnyy proyezd, 23, TsRK SSSR, Radiolyubitel'skaya avariynaya sluzhba (RAS) [Radioamateur Emergency Service (RAS), Central Radio Club of the USSR, 23 Pokhodnyy Proyezd, 123459 MOSCOW].

Radiostations: UK3A, UK3B, and UK3F.

pp 7 - 9: "STV-12 SYSTEMS" ["SISTEMY STV-12"][7], by A[eksandr Mikhaylovich] Varbanskiy, Ministry of Communication of the USSR.

[Continuation of series on direct television satellite broadcasting in RADIO #05/1989, RADIO #06/1989, and RADIO #09/1989. Includes tables and maps, showing frequency channels and radiation patterns for television broadcasting in the 12 GHz band authorized by the World Administrative Radio Conference, Geneva, 1979. A postscript laments the slow pace of Soviet efforts to develop television broadcasting in this band.]

pp 10 - 11: "ABOUT 'HOLES' IN RADIOSPORT,'" by A. Antonov, Saransk-Kuybushev.

Do you know what they call Saransk [capital of the Mordovskaya ASSR, some 500 km ESE of Moscow]? A "hole in radiosport." I heard this at a meeting called at my request to get acquainted, for the editors of RADIO, with the state of amateur radio in Saransk.

The conversion of radio clubs into radiotechnical schools [as recalled, this occurred in the first half of the 1970's] caused a slow dying out of radiosport.

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[6]See summary translation RADIO #06/1989, pp 10 - 11, for more detail concerning the "Radiotsentr" association, which was described as being attached to the Central Radio Club.

[7]STV-12 = sistema televisionnogo veshchaniya v diapazone 12 GHz, literally "system of television broadcasting in the 12 GHz band."

To begin with, they put a lock on the door of the club, located down town. Then they moved the amateurs to a neighborhood on the outskirts which was difficult to get to and had a bad reputation. Many parents wouldn't let their kids go there.

"Look how many 'informals' ['neformaly' -- I assume this refers to illegal radio operators] there are in Saransk!" said V. Chernyshev, UA4UAT, speaking at the meeting. "And among them are many of 'our' previous [students]. It's not their fault that they're becoming 'difficult.' They just have no place to go, no place to engage in their favorite activity. And the kids are interested in amateur radio. I recently installed an antenna on my new apartment [building] and the so many kids from the neighborhood came that I couldn't fit them in..."

The chief of the DOSAAF Combined Technical School, F. Mzokov, said that the main task of his school was to train specialists for the Armed Forces, and that, while the school would help when it could, it wasn't in a position to take responsibility for developing amateur radio and radiosport.

Well at least this was an honest admission.

And then a storm broke out of a clear sky. Ye. Volodin, UA4UAR, Deputy General Director of the PO [proizvodstvennoye ob"yedineniye - production combine] Svetotekhnika of the NTTM [nauchno-tekhnicheskoye tvorchestvo molodezhi - Scientific-Technical Creativity by Young People] took the floor to propose combining forces to develop amateur radio. He offered to make one storey of a soon-to-be-completed NTTM center available for a republic radio club. He also offered to help with funds, beginning with a contribution of 20 or 30 thousand rubles.

The meeting went on for hours. After ten years or more of things going nowhere or rather dying out, suddenly funds and a "roof" -- and even more important wonderful people who have taken it upon themselves to give a new impetus to the radio amateur movement in the Republic. Well, the best of luck. One thought, though, concerns me -- what if I hadn't been sent here by the magazine, and the meeting hadn't taken place, and Saransk had continued to be a "hole in radiosport"?

It's too early to speak of basic changes, but there's no doubt that the ice has begun to break up.

pp 15 - 16, inner back cover: "AND STILL THE BIG LEAGUE?" by Ye[lena Vsevolodovna] Turubara, [datelined] Siauliai - Moscow.

The Sport Radiodirectionfinding Championship of the USSR [chempionat SSSR po sportivnoy radiopelengatsii], held at Siauliai, Lithuania, ended in a three-hour downpour. A. Simanaytis and R. Dapkus, both Lithuanians, took the gold and silver medals. Dapkus beat the well-known master, V. Chistyakov, by 19 seconds.

Things were more straightforward with the women. World Champion Lyuba Buchak took first place, Latvian sportswoman S. Krumini second, and O. Shutkovskaya from Tomsk third. In the team count, the Ukraine, Russia, and Byelorussia took first, second, and third places. Meritorious Master of Sport G. Petrochkova was on the Byelorussian team this time.

p 17: "IN KALUGA THERE LIVES AN INVENTER," by Ye. Lada [a woman, as indicated by past verb tenses in the article].

In addition to the collective of A[leksandr Pavlovich] Papkov, [UA3XBU,] the well-known creator of amateur radio equipment for use in space, another brilliant construction talent, that of Anatoliy D'yakonov, who designed a sound-frequency signal generator, which won the main prize at the 34th All-Union Exhibition of Radioamateur Constructors' Creativity. D'yakonov was struck by illness in his student years and had to leave the institute [he was attending]. His love of radio technology saved him from loneliness.

p 20 - 22: "CONTEST REPORT," by B[oris Grigor'yevich] Stepanov, UW3AX. [Description of a computer program by OH2BQS for IBM PC AT/XT-type computers for preparing contest reports. 4J1FS is used as an example to illustrate the use of the program.]

pp 22 - 25: "CQ-U."
INFO*INFO*INFO, edited by A. Gusev, UA3AVG

"WHO'S OPERATING WITH WHAT?"

A. Polyakov, UF6FG, has tried to find out what equipment is being used the most by Soviet shortwavers. In the course of a year he asked over 1500 stations operating on 3.5, 7, and 14 MHz. According the his data, the most popular was the first version of the UW3DI transceiver, used by 31%; 25% have the UA1FA sets described in the brochure "I'm Building a Shortwaver Radiostation."

The second version of the UW3DI transceiver is used by 19%; 7% use homemade equipment; 4% prefer a "Base" receiver [? - Bazovyy priyemnik] with a transceiver accessory. "KRS-78" and "KRS-81" transceivers are used at 3% of the stations, and 2% use manufactured "Efir-M" transceivers.

Equipment also mentioned included the "Ural-84" and the R-250 with accessory, the DL-69 and the "Radio-77" designed by RA3AO and UP2NV, and also the "Radio-76M2" and the DX-hunter's transceiver.

"IARU NEWS"

[Annual symposium on amateur radio and radiosport held in October by the Federation of Radio Amateurs of Romania.]

[Five resolutions adopted by the Administrative Council of the IARU at Seoul.]

[Twenty-fifth anniversary of REGION 1 NEWS.]

[Medals awarded by Region 1 of the IARU to Walter Empsten, ON4ZN; Carl Smith, W0BWY; David G. Sumner, K1ZZ.]

[Review of amateur provisions -- band and power limits, callsign issuance, etc. -- in Hungary.]

About twenty VHF FM repeaters are in use in Hungary, some of them within reach of Soviet amateurs, as is Hungarian NBFM repeater HA5BME operating on 28585 (in), 28685 kHz (out). The Hungarians also have about ten digital repeaters for packet radio; one of these provides access to a network of VHF repeaters via a digital HF repeater, HA4KYN, operating in the 20m band.

"ON THE AIR -- AN AUTOMATIC ANSWERER." [Description of Bologna "robot" IY4M, operating on a center frequency of 28195 kHz.]

"SWORTWAVERS' ACHIEVEMENTS." [Callsign; Number of Countries; Number of Countries (by band); Total (of per-band country counts)]

ДОСТИЖЕНИЯ КОРОТКОВОЛНОВИКОВ

Место	Позывной	Число стран	Число стран на диапазонах МГц						Всего
			1.8	3.5	7	14	21	28	
Индивидуальные станции									
1	UR2QD	333	121	230	275	333	309	278	1546
2	UA4HBW	326	152	180	232	308	289	254	1415
3	UA9CBO	329	152	198	239	314	231	227	1361
4	RA3AR	306	68	185	237	306	289	215	1300
5	UQ2HO	335	58	191	233	313	292	221	1308
6	RB5IJ	288	124	172	198	286	254	252	1286
7	UW6MF	341	58	183	221	341	255	225	1283
8	UQ2MC	340	60	174	192	324	273	250	1273
9	UW9WR	287	34	197	206	287	274	266	1264
10	UP2BR	340	56	177	214	308	275	230	1260
Коллективные станции									
1	UR1RWX	337	155	225	301	331	312	280	1604
2	RU8PYL	303	101	156	229	303	297	283	1369
3	UQ1GXZ	331	89	190	255	326	285	197	1342
4	UZ3XWA	297	62	116	172	268	219	177	1014
5	UZ4AXQ	288	68	103	147	273	216	161	968
6	UZ4FWD	335	63	130	161	278	180	143	955
7	UT4UXW	202	64	92	111	189	106	101	663

Information for the next table is to be sent by 15 January 1990 to 348903, g. Schast'ye Voroshilovgradskoy obl., ab. yash. 1, A. V. Kucherenko [Anatoliy Vasil'yevich Kucherenko, UT5HP, P. O. Box 1, 348903 SCHAST'YE (Voroshilovgradskaya Oblast')].

"Radio" magazine plans to publish a similar table based on Soviet shortwavers based on administrative units in the country (R-100-O diploma listing). Send information by 15 January 1990 to the editors of "Radio" magazine at 123458, Moskva, ab.yashch. 453 [P. O. Box 453, 123458 Moscow]. The editors reserve the right to verify the correctness of data submitted to them.

VHF*UHF*SHF, edited by S. Bubennikov

How many ultrashortwavers [users of VHF/UHF/SHF] are there in our country? During the last 2 to 3 years, according to UZ9UT and UA9CS, over a thousand stations have operated from 272 grid squares in 13 fields (77 squares in field KO, 36 in KN, 10 in KP, 1 in LM, 23 in LN, 52 in LO, 5 in LP, 6 in MN, 33 in MO, 4 in MP, 1 in NN, 21 in NO, and 3 in OO).

A father and son -- UA6WHW and UA6WFY -- have begun operating from a populated point near Khasavyurt, Dagestanskaya ASSR. From UA6HFY.

[A table (not repreduced here but available from W4KM on request) entitled "Ultrashortwve Beacons" provides the following data on 53 beacons -- 42 operating between 144 and 145 MHz and 11 between 432 and 433 MHz: Callsign, frequency, WW-locator (in all but 5 cases the subsquare is included), power, type of antanna, and QTF in degrees. Accompanying information indicates that there are now beacons (presumably "ultrashortwave" beacons as opposed to any that may operate on 28 MHz) in 34 "oblasts." (The quotes around "oblasts" appear in the original and are probably explained by the fact that not all of them are literally oblasts; some are other geographical/administrative subdivions equated to oblasts for amateur radio purposes. See Annex 2, pp 20 - 21.)]

pp 26 - 28: "AT THE 'CHELYUSKIN'[8] PLACES" ["PO 'CHELYUSKINSKIM' MESTAM"], by G[ennadiy Grigor'yevich] Shul'gin, UZ3AU [ex-UA3ACM], [datelined] Pevek, Ayon Island, Moscow. [This is the sequel to an article in the previous issue (see summary translation RADIO #10/1989, pp 7 - 11) by Wallace V. Kaufman, KN4AC, ex-KC4EBX, who wrote on the same DXpedition in QST for October 1989, pp 14 - 16.]

[photo, p 26:] Operating position on Ayon Island.
[p 27, top:] Assembly of the "MOSLEY" triband antenna.
[p 27, center:] Expedition leader Valeriy Shinevskiy, UA0KK.
[p 27, bottom:] Well-known DX-er/traveler Terry Dubson, W6MKB.

On 13 February 1934, the steamship "Chelyuskin," located in the East Siberian Sea, was breached. The last radiogram from aboard the vessel, transmitted by radioman E. T. Krenkel', read:

"Six hours Moscow [time], 13 February. Uzlen. Khvorostanskiy[9]. Engines and boiler [? - Kochegarka] flooded. Water entering first and second holds. Unloading proceeding well. Two months rations unloaded, attempting unload more. Upon receipt pass copies of all my telegrams to Moscow, Council of Peoples Commissars, Kuybyshev, and to Main Northern Route [Administration], Ioffe[9]. SHMIDT"

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[8]The "Chelyuskin" sank on 13 February 1934 while the Danish-built vessel was attempting to sail the entire northern route (north of the USSR, in the Arctic Ocean) in a single navigational season. The famous Soviet radioman and radio amateur Ernst Teodorovich Krenkel' was chief radioman of the expedition and continued to provide radio communication until he and the last of the survivors were rescued from an ice-floe 13 April 1934. In recognition of this feat, Krenkel' was awarded the use of the ship's callsign, RAEM, as his amateur callsign. The head of the expedition, Otto Yu. Shmidt, was flown to Alaska for medical treatment and later was received by President Roosevelt in Washington; this and the other US involvement described in the article may have inspired the idea of a joint USSR-US expedition, 55 years later, to the area where the Chelyuskin incident took place.

[9]Note the use of the "top-down" Russian address order.

The Chelyuskin crew, which included women and children, disembarked onto the ice. Arctic February. Icy winds, temperatures to -50° C [-58° F], and a two-tube, one-watt, UB-107 transmitter, the only link between Shmidt's camp with the polar station on Uzlen Island. The two brave radiomen -- Ernst Krenkel' on the ice and Lyudmila Shreder[10] at the polar station understood that to a large degree the lives and rescue of the Chelyuskin crew depended on them and did everything possible to see that that contact was not broken off.

The courage and steadfastness of the Chelyuskin crew amazed the world. "One can envy a country having such heroes and one can envy heroes having such a Homeland!" said one of the Danish sailors[11].

During the rescue of the Chelyuskin survivors, the Soviet people (by the way, American aviation mechanics Laveri and Armstid participated in the rescue work and were awarded Orders of Lenin by the Soviet Government) displayed solidarity and courage, which doubtless affected future relations between capitalist countries and the Soviet Union.

And it is significant that the renewal of friendly contacts between the countries on either side of the Bering Strait have a 55-year history.

* * *

The idea of a joint Soviet-American radioexpedition to the scenes of the Chelyuskin was born about a year ago. Chukotsk shortwaver Valeriy Shinevskiy, UA0KK, wrote to American radio amateurs proposing a joint radioexpedition to Ayon Island, located at 70° N in the East Siberian Sea. Among those responding favorably were Terry Dubson, W6WKB, a well-known DX-er; Tony Loeb, AB6Q, a traveler fluent in Russian; Ron Oates, AA4VK, holder of a DXCC endorsement for working 310 countries; Wallace Kaufman, KC4EBX [since KN4AC], a writer-publicist; John Ritter, W4MQB, a veteran of amateur radio in Florida and a yachtsman and motorcyclist.

The Americans planned to bring their own equipment, in the belief that manufactured equipment was much better then homemade. The "MOSLEY" firm donated two three-element tri-band YAGIs and a dowel antenna for 40 and 80 meters. Much time was consumed getting permission to import and export equipment and for foreign radio amateurs to operate in a border area.

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[10]Interestingly, Shmidt, the leader of the expedition, Krenkel', the chief radioman, and Shreder (Schroeder?), the woman radio operator on nearby Uzlen Island, all had names suggesting German ethnic origin. In Krenkel's case, we know from his book "RAEM Is My Call-Sign" (English translation: Progress Publishers, Moscow, 1978) that both his mother and father were of German extraction.

[11]The "Chelyuskin" was of recent Danish manufacture and called at Copenhagen shortly before her fateful voyage. Unlikely though it seems, this remark suggests that some Danish crew may have remained with the vessel.

The expedition was financed by the newspaper "Moscow News" and by the Komsomol Committee of the First Magadan Combined Aviation Detachment.

And so a year later we met the American group in Moscow. Except for Tony, AB6Q, this was their first visit to our country.

The flight from Moscow to Pevek took seven hours. Chukotsk hositality is surprising! The bitterer the climate the nicer the people.

Aleksandr Nikolayevich Likhachev, Chairman of the Chaunskiy Rayon DOSAAF Committee, warmly greeted the participants. This tireless person seemed to be everywhere at once -- at the base station in the settlement of Apapel'gino, and in Pevek, and on Ayon Island. Rushing from place to place got him a speeding citation from Pevek's only traffic militiaman. I'd like to give a big thank you to Aleksandr Nikolayevich, who contributed much to the success of the expedition.

The Chukotsk winter was in full swing, the temperature was below fifty [i.e. colder than -50° C / -58° F], a piercing "yuzhak" wind was blowing, and there were meters-high snowdrifts everywhere, making you forget that according to the calendar the first month of spring was nearing its end. The guests were equipped with fur jackets, [unty -- meaning unknown] and hats of dog fur, but even in such dress the frost at times "nips" [? - moroz uspevayet "prikhvatit'"] at times the nose, at other times the cheeks. At a short meeting, Valeriy Shinevskiy, UA0KK, laid out the program and goals of the joint Soviet-American Radioexpedition dedicated to the 55th anniversary of the end of the heroic "Chelyuskin Epic" ["chelyuskiskaya epopeya"].

Two positions were provided for operating on the air. One, on Ayon Island, would operate with the callsign US0SU; the other, at the settlement of Apapel'gino, US0US/1. Both would provide a new prefix and a maximum number of points for the "RAEM" diploma[12]. Each week those in Apapel'gino changed places with those on the island, thus providing each operator the opportunity to work under fixed and "field" conditions.

The MI-8 [helicopter] flew for about one hour in the middle of the short polar winter day to the Chukosk settlement on Ayon Island. We were greeted by local residents in national fur dress and our own people who had gone on ahead the day before to prepare the operating positions.

Our group attracted a lot of curiosity, especially since this was the first time guests from across the ocean had been on the island.

We raised the flag of the expedition, skillfully designed by Yuriy Lobachev, UA0KCL.

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[12]As recalled, the popular RAEM diploma (certificate), which is believed to be available to Soviet and foreign amateurs alike, is awarded for c.w. contacts with Soviet amateur stations beyond the Arctic and Antarctic Circles.

Inside the [balok] [meaning unknown], it was warm and cozy. There were three operating positions.

The next day, we assembled the antennas donated by the "MOSLEY" firm. The tube ends were labeled and the work went fast.

Terry "operated" on the KENWOOD transceiver, whose many module connectors had been frozen. Still only hissing in the earphones. "Aurora!" concluded Viktor Solov'yev, UA0IDX. "Now don't expect propagation for days!" Too bad we didn't have ultra short wave [VHF/UHF/SHF] gear; we could have tried working Alaska and Canada.

* * *

Still no propagation. We began to be alarmed: What if this continued til the end of the expedition? We tried to install a second operating position equipped with a TS-440 and a HENRY 2K amplifier. Alas! The two transceivers interferred with each other so much on account of the same intermediate frequency that simultaneous operation wasn't possible. We got out of the situation by connecting up the KENWOOD and the KRS-78!

Twenty-four hours later, as though specially in time for the beginning of the operation, propagation opened to Europe. The "Aurora" still made itself felt -- almost all stations were received with a characteristic wheeze and echo. AT 0000 GMT 3 April, I read out an appeal by the participants to people of good will on the planet Earth and made the first contact with Vladimir Synkov, UA1ZO, in Murmansk. And then started what makes the heart of every shortwaver stand still. In a half hour I made a hundred QSO's. I noticed an imploring glance by Valeriy, UA0KK, and turned my position over to him. The contact rate didn't go down and propagation improved...

Now Tony Loeb, after reading our appeal in English, began filling the log with dozens of American stations. People sometimes called us by telegraph, but so far we were only operating SSB.

Mornings, Ron - AA4VK, Yuriy - UA0KCL, and I were on duty. For two hours Ron ran a pile-up from the USA, working in advertising for "MOSLEY" and "TEN-TEC" -- evidently this was part of the Americans' program. Yuriy and I went over to CW. US0SU was very popular on telegraph -- every contact represented points for the "RAEM" [diploma][12].

Sometimes we heard our colleagues at US0SU/1 in Apapel'gino -- they were also operating at a rapid rate. Viktor Solov'yev - UA0IDX and Viktor Malanin - UA0ICC relieved us and took advantage of opening propagation on 10 and 15 meters to work a massive number of Japanese stations.

That's how we operated for almost ten days. Sometimes propagation disappeared in the middle of a sentence. At first we'd feverishly try different bands and twist all the dials, but one gradually gets used to the "tricks" of polar propagation. Now I understand why there are so few Masters of Sport of the USSR among shortwaver sportsmen in the extreme north-east of the USSR, notwithstanding their high quality of operation. The reasons are shortcomings in contest rules and the whims of propagation. And I thought of Krenkel', who with his low-power transmitter never lost communication between the ice-floe and the mainland.

After ten days spent together on the island, I noted with satisfaction that I didn't feel a difference between our group and the Americans, so alike were our concerns and interests. True, our guests preferred to work telephone and we preferred telegraph.

Our expedition was over. We had over 13 thousand contacts with 124 countries according to the DXCC listing. QSL-managers JG1OUT and UA0KK have their work cut out for them. I again became convinced that homemade radio equipment is not as good as manufactured equipment only as concerns servicing possibilities [?-- servisnyye vosmozhnosti], design, size, and weight; but with regard to electrical characteristics homemade equipment is better in some respects.

The basic task of the radio expedition -- building a bridge of friendship between our countries -- was accomplished successfully. We of course haven't studied diplomacy, but the Americans, who had been in many countries, unanimously said they were struck by the good will of Soviet people. Peace, of course, will be more solid if it is strengthened not only by governments but by simple people. And the contribution of shortwavers to this is not a small one. As Terry Dubson said at the farewell ceremony: "If amateur antennas are installed at the Kremlin and the White House, there will be peace on the planet!

How we'd like to believe this!

[end of RADIO section]

[This annex contains rough summary translations of selected items from **SOVETSKIY PATRIOT** (SP), a newspaper published on Wednesdays and Sundays by the military training organization DOSAAF. News concerning amateur radio appeared in the numbered column **"NLD"** ("Na lyubitel'skikh diapazonakh" - "On the Amateur Bands"), edited by Boris Grigor'yevich Stepanov, UW3AX, and dated the same as the newspaper containing it.]

NLD-1411, 1 November 1989:

COMPETITIONS [CONTESTS]

[Announcements of QRP CONTEST (CW) 1 - 7 November, OK DX CONTEST 11 - 12 November, and teletype WAE DX CONTEST 11 - 12 November, with addresses to which reports may be sent.]

Reports on participation in the All-Union 160m-Meter-Band Radiocommunication Competitions [vsesoyuznyye sorevnovaniya po radiosvyazi na diapazone 160 metrov] [date not specified here but given in "CQ-U" colunm of RADIO #09/1989 as 4 - 5 November 1989] are to be sent to 672007, Chita, ul. Bogomyakova, 47, RTSh (sudeyskoy kollegii) [Judges' Collegium, Radio Technical School, 47 Bogomyakov St., 672007 CHITA].

Reports on participation in international shortwave and ultrashortwave competitions may be sent directly to the corresponding judges' collegium or via the Central Radio Club of the USSR Named After E. T. Krenkel'. [This is believed to be a new policy under glasnost': Previously, if my recollection is correct, all reports on participation in international contests had to be submitted to the Central Radio Club.]

NLD-1412, 5 November 1989:

PROPAGATION

Less favorable propagation than that described in the preliminary predictions in "Radio" magazine is expected on 14 - 20 and 23 November. Revised Wolf number for November: 167. The Earth's magnetic field was slightly [slabo] agitated on 26 - 27 October and severely [sil'no] agitated on 20 - 22 October. From UA3AOW.

RADIOAMATEUR SATELLITES

The number of the first orbit on 11, 18, and 25 November, and the time [GMT] and ascending-node longitude for RS-10 will be [as given]: 11954-1, 16-299, 12050-1, 17-312, 12146-1, 18-324. [This is the way the figures appear in the original article. One possible interpretation of them is 11954 - 0116 - 299°; 12050 - 0117 - 312°; 12146 - 0118 - 324°.] Period of rotation - 104.965 min., longitudinal increment - 26.3813°. From RA3AT.

COMPETITIONS

Reports on participation in the CQ WW DX CONTEST may be sent to CQ MAGAZINE, 76 NORTH BROADWAY, HICKSVILLE, NY 11801, USA -- by 1 December 1989 for the 'phone contest and by 15 January 1990 for the telegraph contest.

CLUB NEWS

RA1QQ/RA0Q is active from the Medvezh'iye [Bear] Islands on 14 and 21 MHz, CW and SSB. QSL (PSE SASE) via RA1QX at the address 162600, Vologodskaya obl., Cherepovets, ab./yashch. 1 [P. O. Box 1, 162600 CHEREPOVETS (Vologodskaya Oblast')]. He'll be on the island about a year and a half. From RA1QX.

RA1QEG/RW1P operates from the polar station Ust'-Kara (mostly on 14 and 21 MHz CW). Next summer he plans to operate from Vaygach Island. QSL via UZ1PWA, at 164744, Amderma, ab./yashch. 73 [P. O. Box 73, 164744 AMDERMA]. From UA1QEG.

NLD-1413, 15 November 1989:

CLUB NEWS

The memorial diploma called "Along the Routes of Ancient Sea Voyages" for contacts with RB5FH/MM (see NLD-1407) costs 5 rubles. Proceeds go to the fund for improving the ecology of the Black Sea basin. Apply to 272500, Odesskaya obl., Artsiz, ab./yashch. 2 [P. O. Box 2, 272500 ARTSIZ (Odesskaya Oblast')]. QSL cards for RB5FH/MM go to the same address. From RB5FT.

The following stations will operate on 24 November from Kareliya: RZ6AA/UN, UA6AH/UN, UV6AIU/UN, UA6ASG/UN, RA6AAB/UN, and UA6BAC/UN. (See NLD-1367.) From UA6AH.

QSL addresses: UL1K/UA9SAW (9 - 17 September 1989) - 462630, Orenburgskaya obl., Gay, ab./yashch. 13 [P. O. Box 13, 462630 GAY (Orenburgskaya Oblast')]; RJ7R, RJ4R/UJ8JV, and RT8U/UJ8JCQ - 734032, Dushanbe, ab./yashch. 1102 [P. O. Box 1102, 734032 DUSHANBE] (from UJ8JCQ); RT4UA/RJ3J, RT4UA/RJ3R, and RT6U/UJ8JW (20- and 40-meter bands) - 252146, Kiyev, ab./yashch. 427-3 [P. O. Box 427-3, 252146 KIEV] (from RT4UA); UT4UX/RJ5J, UT4UX/RJ5R, and RT6U/UJ8JW (15-meter band) - 252162, Kiyev, ab./yashch. 579-1 [P. O. Box 579-1, 252162 KIEV] (from UT4UX); UI8IAY/UI1C and UI8IAQ/UI2C (16 - 21 October 1989) - 703000, Samarkand, ab./yashch. 71 [P. O. Box 71, 703000 SAMARKAND] (from UI8IAJ).

4J5FV (Oblast' 013) will operate in the CQ WW DX CW CONTEST. A memorial diploma will be issued for making two contacts with it on different bands or modes having in mind the CQ WW DX SSB CONTEST. Apply to 343820, Donetskaya obl., Yenakiyevo-29, ab./yashch. 1, RRA [expansion of RRA unknown] [RRA, P. O. Box 1, 343820 YENAKIYEVO-29 (Donetskaya Oblast')] From RB5IJ.

DISTANT STATIONS

From 15 through 17 November, NT2X will operate .../KH2 (or WH2), from 17 through 21 November .../KH0, and from 21 through 27 November from KC6. K1XM, KQ1F, and K2WR will also operate from KC6. They will be active in the CQ WW CW DX CONTEST using KC6 calls or their home calls plus .../KC6. QSL via KQ1F. From UL7EZ.

The "RUSSIAN DX NET" operates on Tuesdays and Thursdays on 3640 kHz beginning at 2100 or 0000 GMT; afterwords the net may QSY to 1860 kHz. From RB5FF.

AA4VK and W4TLI will operate from 5W1 on 20 through 25 November and from KH8 25 - 26 November, on 14,210, 21,300, and 28,500 kHz plus and minus QRM. QSL to home call. From UV3GZ.

NLD-1414, 22 November 1989:

COMPETITIONS

[December contests.] 23 - 24 December - RAEM CONTEST (CW).

DISTANT STATIONS

In late November, a group of Hungarian shortwavers will operate from Laos (XW8DX) and from Spratly Island (1S1DX). From RA3AUU.

NLD-1415, 29 November 1989:

RADIOAMATEUR SATELLITES

The Satellite Radiocommunication Championship of the USSR [Chempionat SSSR po radiosvyazi cherez ISZ] will take place from 0000 to 2400 MSK 3 December [from 2100 GMT 2 December to 2100 GMT 3 December]. Reports go to 117311, Moskva, prospekt Vernadskogo, 9/10, MGSTRK (sudeyskoy kollegii) [Judges' Collegium, MGSTRK, 9/10 Vernadskiy Prospekt, 117311 MOSCOW]. Reference data for calculating passes via RS-10 for 3 December (time GMT and ascending-node longitude, beginning with orbit N-12253): 2034 - 267°; 2219 - 293°; 0004 - 319°; 0149 - 346°; 0334 - 012°; 0519 - 038°; 0704 - 065°; 0849 - 091°; 1034 - 118°; 1219 - 144°; 1404 - 170°; 1549 - 197°; 1734 - 223°; 1919 - 250°. Period of rotation - 104.965 min., longitudinal increment - 26.3813°. The repeater will operate in the 144/28-MHz mode and the "Robot" will be switched off. From RA3AT.

CLUB NEWS

From 6 through 12 December the station of the club of young radioamateurs of Mashtotskiy Rayon in Yerevan [capital of the Armenian SSR; the Armenian SSR, though not Yerevan itself, was struck by an earthquake 7 December 1988] will operate with the callsign RG8GWS/A from the place where a Yugoslav aircraft, flying to Armenia with assistance, crashed [poterpel katastrofu]. From UG7GWA via UK3A.

UA0BAN will operate from the island of Golomyannyy (Severnaya Zemlya) on all bands, CW and SSB. His QSL manager is RB5FO, 270000, Odessa, ab./yashch. 321 [P. O. Box 321, 270000 ODESSA]. From RB5FO.

DIPLOMAS

Apply for the "Magadan-50" Diploma to 685024, Magadan, ab./yashch. 1691 [P. O. Box 1691, 685024 MAGADAN]. From UA0IDM.

[end of SOVETSKIY PATRIOT section]

BACKGROUND INFORMATION ON GEOGRAPHICAL DIVISIONS OF THE USSR

The summary translations of articles in the monthly magazine RADIO and in the twice-weekly newspaper SOVETSKIY PATRIOT contain references to Soviet geographical units that may be unfamiliar -- USSR, RSFSR, SSRs, ASSRs, autonomous oblasts, autonomous okrugs, oblasts, rayons, etc. Familiarity with these units is useful because the two organizations most immediately involved with the Soviet radio amateur movement -- DOSAAF and the federations of radio sport -- are structured on the basis of all but the lower levels of these units.

Most geographical units used in the USSR do not equate to ones used elsewhere. Where direct English translations do not exist or would be ambiguous ("oblast'" and "rayon" can both be translated into English as "region"), the Russian term, with anglicized plural, has been preserved.

There are two fundamental types of geographical units in the USSR, **"non-nationality-based"** and **"nationality-based."** As used in the USSR, the term "nationality" ("natsional'nost'") refers to ethnic origin, not country of allegiance.

First Level

The highest-level unit, the USSR, is non-nationality-based. Constitutionally, the country is what the initials USSR stand for -- a "Union" of "Soviet Socialist Republics." In amateur radio publications, this highest level, that of the country as a whole, is referred to variously as "All-Union," "of the USSR," "of the Soviet Union," or "of the country."

Second Level

The second level consists of the fifteen "Soviet Socialist Republics" (SSRs), which are the highest nationality-based units. The SSRs, sometimes termed "Union Republics" to differentiate them from Autonomous ASSRs (see below), are the main constituent parts of the USSR -- Russia itself (the RSFSR), the Ukraine, Byelorussia, Azerbaydzhen, Georgia, Armenia, Turkmenistan, Uzbekistan, Tadzhikistan, Kazakhstan, Kirgiziya, Moldavia, Lithuania, Latvia, and Estonia. The RSFSR, which occupies 75% of the land mass of the USSR and contains 50% of its population, has, as its title suggests, a federated substructure; it is sometimes referred to as the "Russian Federation." Each SSR has its own language, flag, and Council of Ministers. Under the Soviet Constitution each SSR has the formal right of withdrawing from the USSR.

Third Level

The fifteen Soviet Socialist Republics are divided into both non-nationality-based and nationality-based units. The more common non-nationality-based type consists of two sub-types, the oblast' and the more thinly-populated kray. In all or part of some SSRs, the oblast'/kray level is omitted, in which case the next subdivision is the normally fourth-level rayon.

If a portion of an SSR is inhabited principally by a distinct ethnic group, it may be designated an Autonomous Soviet Socialist Republic (ASSR), the second-highest nationality-based unit, instead of an oblast' or kray. ASSRs have their own language, flag, and council of ministers, whereas oblasts and krays do not. The remaining nationality-based units are the autonomous oblast', subordinate to an SSR, and the autonomous kray (district), subordinate to an oblast' or kray. Soviet amateur publications occacionally report DXpeditions to remote nationality-based units.

Fourth Level

The rayon may be compared to Anglo-Saxon countries. Large cities such as Moscow and Leningrad have rayons within their borders, a reversal of the normal hierarchical relationship.

Lower Levels

At the local level there are cities and towns (the Russian word gorod means both), villages (selo, or in the Caucasus aul), settlements, and "rural populated points." All of these lower-level units are of the non-nationality-based type.

"Pervasiveness"

Of the subdivisions described above, only the nationality-based SSRs and the non-nationality-based rayons are "pervasive" in the sense that any point in Soviet territory lies within one SSR or another and within one rayon or another.

Despite the fact that the oblast' is by no means "pervasive," it has in effect been made so for amateur radio purposes. This has been done by equating small SSR's, ASSR's, krays, autonomous oblasts, autonomous okrugs, and large cities to oblasts and by assigning "oblast' numbers" to them as well as to "real" oblasts. In this way, no one is left out of the large number of amateur radio events based on oblasts. (A similar situation would exist in the United States were the County Hunter organization to equate, for amateur radio purposes, the District of Columbia and independent cities such as Baltimore, to counties, so that no point in US territory did not lie within one "county" or another.